

**ABSTRACT**

5 A detector for optical analysis of a biochip determines the focal position of a plurality of analytes on the biochip using one or more registration markers on the biochip, wherein the analytes and the registration marker are illuminated by different light sources. Therefore, contemplated configurations will significantly reduce overall focusing time and automate proper positioning of the biochip, while allowing to determine a focal position without photobleaching or other undesirable effects on optically labile compounds. Thus, automated analyses can be performed without manual user intervention.